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A composition comprising:

- a) an electrode comprising:
 - i) a monolayer comprising conductive oligomers; and
 - ii) a capture probe;

b) a target sequence comprising a first portion that is capable of hybridizing to said capture probe, and a second portion that does not hybridize to said capture probe and comprises at least one covalently attached electron transfer moiety.

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A composition comprising:

- a) an electrode comprising:
 - i) a monolayer comprising conductive oligomers; and
 - ii) a capture probe;

b) a label probe comprising a first portion that is capable of hybridizing to a component of an assay complex, and a second portion comprising a recruitment linker that does not hybridize to a component of an assay complex and comprises at least one covalently attached electron transfer moiety.

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- 3. A composition according to claim 2 wherein said ETM is ferrocene.
- 4. A composition according to claim 2 wherein said label probe comprises a plurality of ETMs.
- 5. A composition according to claim 2 wherein said first portion of said label probe further comprises a covalently attached ETM.
- 6. A composition according to claim 2 wherein said assay complex comprises an amplifier probe.
- 7. A composition according to claim 2 wherein said assay complex comprises a capture extender probe.

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- 8. A composition according to claim 2 wherein said monolayer further comprises insulators.
- 9. A composition according to claim 2 wherein said capture probe is attached to said electrode via a conductive oligomer.

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10. A composition according to claim 2 wherein said capture probe is attached to said electrode via an insulator.

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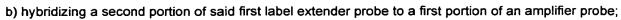
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11. A method of detecting a target nucleic acid sequence in a test sample comprising:

- a) attaching said target sequence to an electrode comprising a monolayer of conductive oligomers;
- b) directly or indirectly attaching at least one label probe to said target sequence to form an assay complex, wherein said label probe comprises a first portion capable of hybridizing to a component of said assay complex, and a second portion comprising a recruitment linker that does not hybridize to a component of said assay complex and comprises at least one covalently attached electron transfer moiety;
- c) detecting the presence of said ETM using said electrode.
- 10 12. A method according to claim 11 wherein said label probe comprises a plurality of ETMs.
 - 13. A method according to claim 11 wherein said target sequence is attached to said electrode by hybridization to a capture probe.
 - 14. A method according to claim 11 wherein said target sequence is attached to said electrode by hybridizing a first portion of said target sequence to a first capture extender probe, and hybridizing a second portion of said first capture extender probe to a capture probe on the electrode.
 - 15. A method according to claim 11 wherein said target sequence is attached to said electrode by
 - a) hybridizing a first portion of said target sequence to a first portion of a first capture extender probe;
 - b) hybridizing a second portion of said first capture extender probe to a first portion of an capture probe on the electrode;
 - c) hybridizing a second portion of said target sequence to a first portion of a second capture extender probe; and
 - d) hybridizing a second portion of said second capture extender probe to a second portion of said capture probe.
 - 16. A method according to claim 11 wherein said label probe is attached to said target sequence by hybridizing said first portion of said label probe to a first portion of said target sequence.
 - 17. A method according to claim 11 wherein said label probe is attached to said target sequence by a) hybridizing a first portion of an amplifier probe to a first portion of said target sequence; and b) hybridizing at least one amplication sequence of said amplifier probe to said first portion of at least one label probe.
 - 18. A method according to claim 11 wherein said label probe is attached to said target sequence bya) hybridizing a first portion of a first label extender probe to a first portion of a target sequence;



- c) hybridizing at least one amplication sequence of said amplifier probe to said first portion of at least one label probe.
- 19. A method according to claim 11 wherein said label probe is attached to said target sequence by
 - a) hybridizing a first portion of a first label extender probe to a first portion of a target sequence;
 - b) hybridizing a second portion of said first label extender probe to a first portion of an amplifier probe;
 - c) hybridizing a first portion of a second label extender probe to a second portion of a target sequence;
 - d) hybridizing a second portion of said second label extender probe to a first portion of an amplifier
 - e) hybridizing at least one amplication sequence of said amplifier probe to said first portion of at least one label probe.

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